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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/489,144	01/21/2000	Nan-Xing Hu	D/99136	5415

7590 03/01/2004

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EXAMINER

GARRETT, DAWN L

ART UNIT	PAPER NUMBER
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1774

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/489,144

Applicant(s)

HU ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17, 19 and 25-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 38-41 is/are rejected.
- 7) ☒ Claim(s) 1-17, 19, 25-43 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 2, 2004 has been entered.

### ***Response to Amendment***

2. This Office action is responsive to the amendment filed January 2, 2004 (and amendment with corrected claim status identification filed February 9, 2004). The examiner notes the pages of claims of the response filed on February 9, 2004 have a different serial number at the top of the page; however, the transmittal page/cover page has the correct serial number and the claims are identical to the amendment filed on January 2, 2004, so the extraneous serial number at the top of the page has been ignored. If applicant believes the claims filed on February 9, 2004 are in error, applicant is respectfully requested to clarify the record.

3. Claims 1, 10, 29, 31, 35, 42, and 43 were amended. Claims 18 and 20-24 are cancelled. Claim 38 was withdrawn, but has now been considered. Claims 1-17, 19, and 25-43 are pending and under consideration.

4. The rejection of claims 1-17, 25-37 and 29-41 under 35 U.S.C. 103(a) as being unpatentable over Fink et al. (US 6,352,791) in view of Tang et al. (US 6,048,573) is

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withdrawn due to the incorporation of allowable subject matter from claim 18 into the independent claims.

### ***Claim Objections***

5. Claims 1-17, 19, and 25-43 are objected to because of the following informalities:

- a. Each of claims 1, 10, 29, 31, 35, 42, and 43 recite "said light emitting layer material"; however, light emitting *material* has not been previously recited. The examiner suggests "said light emitting layer material" be changed to "the light emitting material of said light emitting layer".
- b. In claim 15, "**an** methoxyphenyl" should be changed to "**a** methoxyphenyl".
- c. In claims 3 and 15, it appears "biphenylyl" should be "biphenyl".
- d. In claim 28, it is suggested "each of" be deleted for clarity.
- e. In claim 29, "the" should be inserted between "adjacent" and "anode".
- f. In claim 30, "is present and is comprised of a phthalocyanine or a stabilized tertiary aromatic amine and which layer" should be deleted, because the limitation is already positively recited in the parent claim.
- g. In claim 30, it is suggested "a light emitting layer" be replaced with "and said light emitting layer".
- h. In claim 30, it is suggested "is" be inserted between "light emitting layer" and "in contact with said hole transport layer".
- i. In claim 30, it is suggested "and comprised of an 8-hydroxyquinoline metal chelate" be replaced with ", is comprised of an 8-hydroxyquinoline metal chelate".
- j. In claim 30, it is suggested "and which layer is" be replaced with ", and is".

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- k. In claim 34, "trialine" should be replaced with "triazine".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

7. Claims 38-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. In claim 38, the recitation "wherein R<sup>1</sup> to R<sup>5</sup> are each alkyl, alkoxy, or mixtures thereof" renders the claim indefinite. It is not understood how an individual substituent could be a *mixture* of an alkyl group and an alkoxy group. Clarification and/or correction is required.

9. In claim 38 and 39, "wherein at least one" is confusing. Applicant should clarify whether or not the limitation is drawn to the electron transport layer. Clarification and/or correction is required.

10. In claim 41, "wherein at least two" is confusing. Applicant should clarify where or not the limitation is drawn to "conjugated linked" or "fused aromatic rings". Clarification and/or correction is required.

***Allowable Subject Matter***

11. Claims 1-17, 19, and 25-43 contain allowable subject matter with regard to the prior art. The closest prior art is considered to be Fink et al. (US 6,352,791) Fink et al.

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teaches an electroluminescent device comprising triazine compounds as an electron-conducting layer (see abstract). The layers of the electroluminescent device depicted in Figure 1 are the following: 1) substrate; 2) anode; 3) hole injection layer; 4) hole conducting layer; 5) light emitting layer; 6) electron conducting layer; 7) electron injecting layer ; 8) cathode; and 9) encapsulation protective covering (see description of drawings). Although Fink discloses triazine compounds in an electron conducting layer, Fink fails to disclose or to render obvious such a triazine layer in combination with a precisely doped luminescent layer and a buffer layer as claimed in combination with the other recited layers of an electroluminescent device.

### ***Response to Arguments***

12. Applicant's arguments with respect to claims 1-17, 19, and 25-43 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is 571-272-1523. The examiner can normally be reached Monday through Friday during normal business hours. Please allow the examiner twenty-four hours to return your call.

If reasonable attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached at 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



DAWN GARRETT  
EXAMINER  
ART UNIT 1774

D.G.  
February 19, 2004